

REMARKS

This is in response to the Office Action dated September 30, 2009. With this response, claims 2-9, 12-16 and 18-26 are amended; claims 1, 17 and 27 are cancelled; and all pending claims 2-9, 12-16, 18-26, 29 and 31 are presented for reconsideration and favorable action.

1. Clarity

The Examiner objected claim 16 contradicts to claim 15 and therefore it is considered to be not possible to determine what Applicant is intending to claim.

According to dependent claim 15, the apparatus is protected against attacks, i.e., the device does not allow firing of the cartridge during the attack. However, after the attack a firing may still be possible.

According to claim 16 the attack results in a **permanent** destruction of the apparatus, i.e., the apparatus is destroyed such that firing of the cartridge is additionally not possible after the attack.

2. Patentability

In our last letter, we tried to further clarify that the interface 12 within the cartridge is adapted for a **bi-directional** communication.

It appears, however, that the Examiner argues that Brosow discloses (i) a data flow from the cartridge to the firearm (paragraph bridging from column 6 to 7) and Miles discloses the reverse direction of data flow, namely from "outside the cartridge" to the cartridge.

In order to put further emphasis on the bi-directional communication, in particular the "challenge response method", we suggest drafting a new independent claim 1 on the basis of former independent claim 26. Amended claims 26 now clarifies that it refers to a system with two main components, namely the **firearm** with the "security apparatus" and a corresponding **cartridge** with a "security device". Still in other words, amended claim 26 refers to a combination of former claims 1 (apparatus of the cartridge) and 17 (apparatus of the firearm). In order to avoid any confusion regarding the apparatuses, we used the term "device" for the security device within the cartridge and used the term "apparatus" for the security apparatus within the firearm. Thus, the system of amended independent claim 26 further clarifies that the

cartridge is especially adapted to the firearm and vice-versa in order to increase the level of security.

As mentioned in our previous petition, the original case papers refer to the bi-directional communication which is necessary to execute the following method steps:

- (a) a cartridge identification stored in the cartridge is transmitted via interface 12 (part of cartridge) to the firearm;
- (b) based on that cartridge identification a password is calculated by the apparatus located within the firearm, and
- (c) said calculated password (releasing data) is transmitted from the apparatus located within the firearm to the interface 12, i.e., interface 12 receives data from the apparatus located within the firearm (see e.g. page 8, last line to page 9, line 7).

"interface 12 preferably reads the cartridge identification stored in an identification memory 13 and transmits said cartridge identification to the firearm or the apparatus 1 located within the firearm via the cartridge interface 2, here. Furthermore, the interface 12 receives the password calculated by the firearm or the apparatus 1 located within the firearm and transmits said password to a password checking means or a password checking 14. Within the password checking 14, the cartridge password is stored securely against manipulation and reading. The password checking 14 compares the received with the stored cartridge password. "

Further support for this feature may be found at page 3, first paragraph:

*"A further basic idea of a preferred embodiment according to the present invention is that the firearm reads an identification, preferably an individual one, from the cartridge and calculates from this identification along with further data a cartridge password. The cartridge password is transferred to the cartridge. Then, **it is the cartridge itself which decides** whether it ignites or not. " (emphasis added)*

With such a bi-directional communication and the adaptation of the firearm to the cartridge, a high level of security is achieved.

2.1

The system of amended claim 26 further emphasizes that the cartridge itself stores two different types of data, namely (i) identification and (ii) the password data. In this connection, the Examiner may be referred to the disclosure at page 3, 3rd paragraph of the application papers:

*"In a further preferred embodiment according to the present invention, the cartridge comprises at least a memory in which **the identification and the cartridge password are stored**. Here, the storing is achieved in such a manner that the identification can be read out while the cartridge password itself cannot be read out and is used by the cartridge only for comparing the received password. For the use of the cartridge the identification is read out and is calculated to the cartridge password by means of an algorithm. This cartridge password is transferred to the cartridge and is compared with the stored cartridge password by the cartridge. In case the **stored and the received cartridge password match** with each other, the ignition of the cartridge is facilitated or allowed or initiated. The pairing of identification and cartridge password in the cartridge can be generated according to a preferred embodiment of the present invention by an arbitrary algorithm and password and can be individual for each cartridge. The adjustment can be made by the manufacturer, the trader etc. Even a belated change is possible provided that the correct password has been transferred to the cartridge. "(emphasis added)*

The apparatus of the firearm is adapted to calculate on the basis of the identification the releasing data. Said releasing data are transmitted to the cartridge, wherein the device within the cartridge is adapted to compare the generated releasing data with the password data permanently stored within the cartridge.

2.2 Prior art

As already discussed in our previous letter, US 6,283,034 (Miles) refers to a system which sends data from a remote device (ring) to the cartridge (uni-directional to the cartridge).

Cited document US 6,760,992 (Brosow) discloses a data flow from the cartridge to the firearm, however, the information stored in the cartridge are **not relevant** for securing the cartridge from unauthorized firing; see the disclosure from column 6, line 64 to column 7, line 6:

"In addition to the components which are necessary to form the electric pulse of ignition energy the electronic circuit 104 may be provided with a nonvolatile memory the contents of which may be read out at the contact arrangement 106. At the time of manufacturing the ammunition a code identifying the type of ammunition is written into the non-volatile memory, for instance whether it is high-speed ammunition or not. When constituting the firearm using the ammunition 100 in a suitable manner, this code may in various ways be used for the use of the firearm."

Thus, the code stored within the Brosow cartridge is merely used to identify the type of the cartridge; said code is not used for an authentication as done by the present invention.

The Examiner argued that "it should be appreciated that such a modification would merely require that the circuit 104 of Brosow be replaced by a circuit such as that taught by Miles (set forth above) and that the apparatus arranged within the firearm, as taught by Brosow, be modified to transmit a coded signal...". We respectfully disagree.

Amended claim 26 requires, inter alia, a system which uses three different "codes": identification (stored in the cartridge); password (stored in the cartridge) and the releasing data (calculated by the operating device). Even a combination of Brosow and Miles does not teach to use the required three codes.

Moreover, the combined system the Examiner considers as inventive step destroying does not comprise an operating device for calculating the releasing data on the basis of the identification code received from the cartridge (see amended claim 26 and former claim 17).

In this connection we also noted that the Examiner apparently ignored essential features of the operating device as claimed in former claim 17. In particular, the Examiner mentioned in the Office Action at the bottom of page 8 that "Brosow in view of Miles teaches that the apparatus which is arranged within the firearm includes an operating device which **decides whether or not to transmit releasing data to the cartridge**".

However, the operating device of amended independent claim 26 does not only decide whether to transmit releasing data to the cartridge, but further calculates releasing data on the basis of the data as stored in the cartridge. Accordingly, a higher level of security can be achieved by the system according to the present invention.

Accordingly, it is believed that the subject-matter of amended independent system claim 26 is not only novel but also based on an inventive step.

Furthermore, it should be noted that amended claim 26 comprises means to execute the above mentioned method steps (a) - (c). Thus, if possible, you may additionally argue that former independent method claim 29 refers to the same subject-matter as amended independent claim 26 such that the previously raised unit objections are overcome.

It is believed that all of the pending claims have been addressed. However, the absence of a reply to a specific rejection, issue, or comment, including the Office Action's characterizations of the art, does not signify agreement with or concession of that rejection, issue, or comment. In addition, because the arguments made above may not be exhaustive, there may be reasons for patentability of any or all pending claims (or other claims) that have not been expressed. Finally, nothing in this paper should be construed as an intent to concede any issue with regard to any claim, except as specifically stated in this paper, and the amendment or cancellation of any claim does not necessarily signify concession of unpatentability of the claim prior to its amendment or cancellation. Applicant reserves the right to prosecute the rejection claims in further prosecution of this or related applications.

In view of the above amendments and remarks, it is believed that the present application is in condition for allowance. Consideration and favorable action are respectfully requested.

The Director is authorized to charge any fee deficiency required by this paper or credit any overpayment to Deposit Account No. 23-1123.

Respectfully submitted,

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